

1 25. IN-STREAM REED CANARY GRASS REMOVAL (DREDGING AND HERBICIDES) - [LOW]

1.1 Introduction

- Reed canary grass is an invasive non-native species in Washington brought in to the state to provide a wetland pasture grass. Types of sites typically found (low gradient, full sun, relatively wet). Physical and biological effects of the grass (as opposed to the treatment) (i.e. why do people try to remove it?)

1.1.1 Description of Technique

- Shading
- Herbicide Control
- Dredging/Physical Removal
- Ineffective Techniques

1.1.2 Physical and Biological Effects of Treatment

- Effects of Herbicide Control, Dredging, Shading
- Biological Diversity
- Water quality (dissolved oxygen, sediment)
- Channel Conveyance
- Channel Stability
- Discuss duration of time before effects are seen and the long or short-term nature of effects and of techniques' success (e.g. shading provides long-term reed canary grass control but takes years to be effective where dredging and herbicide alone provide immediate but short-term control)

1.1.3 Application of Technique

- Bank Stability in context of PFC
- Urban vs Agricultural vs. Wildland Sites
- Discuss application of quick vs slow-acting technique, long vs short-lived solution. May be appropriate to use a combination of a quick acting and a long-lived technique

1.2 Scale

- Small Scale vs. Large Scale Treatment

1.3 *Risk and Uncertainty*

- Effect of Herbicide Control on Non-target Species
- Risk of Re-establishment of Reed Canary in Treated Sites

1.4 *Data Collection and Assessment*

- Density of Stand
- Quality of Habitat Affected
- Likelihood of Success to Control Reed Canarygrass
- Rooting Depth/Soils
- Adjacent Species/Communities
- Local Seed Source

1.5 *Methods and Design*

- Access
- Timing
- Techniques
- Minimize Risk to Non-Target Species
- Supplemental Planting
- In shading discussion, need to discuss necessary site preparation, plant protection (from voles, livestock), weed suppression (mulch, weed barrier fabric). New plants face severe above ground and below ground competition from reed canary grass. This should be discussed in the riparian management technique and that discussion referred to here.
- One experimental method, variations of which have been used at several sites, is to create artificial hummocks in the surrounding riparian zone. The hummocks or planting mounds offer relatively dry microhabitats that may offer the vegetation planted on the mounds a competitive advantage over the surrounding reed canary grass. This should also be discussed in the riparian management technique and that discussion referred to here.
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1.6 *Project Implementation*

1.6.1 *Permitting*

- Herbicides
- Heavy machinery in wetlands
- In-stream work

1.6.2 *Construction*

- Access
- Timing
- Equipment Needs

1.6.3 *Cost Estimation*

- Range of costs per unit, cite case examples with total project costs.
- Refer to long-term costs of repeat treatments of short-lived solutions to the problem.

1.6.4 *Monitoring and Tracking*

- Duration/Frequency of Monitoring
- Plant Cover by Species in Treated Areas
- Effect on Non-Target Species
- Assessment of Treated Areas

1.6.5 *Contracting Considerations*

- Volunteers vs. Contractor

1.7 *Operations and Maintenance*

- Justification for Repeat of Treatment
- Maintenance of Installed Plants. Refer to riparian management technique.

1.8 *Examples*

InterFluve does not have any examples

There are many examples in both western and eastern WA.

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1.9 References

References cited in this technique so it is a stand-alone pullout.

1.10 Photo and Drawing File Names

List filenames and file locations of any photos and drawing files associated with this technique